

COUNTY CHRONOLOGY

Compiled from the Files of The
Coconino Sun, Twenty Years
Ago This Week

Tonto Basin, according to a writer in the University monthly, was once a great salt lake. This was during the tertiary era. There were then no Salt or Gila rivers. The lake was from 500 to a thousand feet deep. Tonto Basin lake was bounded on the west by the Four Peaks, or Mazatzal range, on the east by the Sierra Anches mountains, on the north by a low range of slate mountains and on the south by dikes and many parallel ranges of mountains. The country adjoining the Tonto Basin also abounded in small lakes, but all were drained by an uplift and erosion. The Lake Tonto was in the form of a right angle, one side extending northward up what is now known as Tonto creek for a distance of about 24 miles, and varied in width from 12 to 15 miles. The side extended eastward up what is now Salt river and had about the same length and depth as the northern arm. The greatest depth of the lake was about 1,000 feet. After it had been filled with water it overflowed the Silver King mountain barrier and began to cut a channel westward. Then the channel of the Salt river was a thousand feet higher than it is now.

U. S. senate committee reports territories of Arizona and New Mexico not yet fit for statehood.

Special election submitting the proposition of water works bonds and sewer bonds resulted in carrying of former and defeat of latter.

Flagstaff needs and must have a high school.

George Babbitt spending 10 days in Los Angeles.

Sheriff J. A. Johnson home from visit in northern California.

Wm. Bach, Beaver Creek rancher, visiting his former home in Missouri.

Mrs. Lucinda Jones, wife of Milton Jones and sister of Mrs. Henry Dietzman and Mrs. W. H. Nichols, dies.

J. C. Moritz and family have moved from Bellemont to Flagstaff.

D. M. Francis home from a month's visit in Missouri.

F. W. Smith of Williams sells his drug business to a California man who also buys the Williams Drug Co. and consolidates the two stores.

R. F. Alsop returns from Ashfork and buys Front street barber shop.

J. D. Raudebaugh and family return from visit in Kansas.

Mrs. Eva Wheeler is seriously ill with pneumonia.

T. E. Pulliam's family leaves for Los Angeles to spend the winter.

F. & A. M. elect following officers: T. J. Coalter, W. M.; A. E. Douglas, S. W.; Harry Fulton, J. W.; T. E. Pollock, Treas.; F. S. Breen, Sec.

EXPERTS CLAIM FLAGSTAFF WATER IS BEST IN WORLD AND A PLENTIFUL SUPPLY

(Continued from Page One.)

only 65 per cent of the water from the reservoirs to the city. This 35 per cent loss is due to sewer flushing, leaks, under registration of meters, etc. Pressure tests were made by the engineers at 48 places throughout the town, with the discovery that 14 hydrants in higher portions of the town were entirely without water pressure, due to the small pipe lines. These tests were made when the large reservoir was full of water.

Five Water Sources Investigated
The engineers investigated thoroughly five sources of supply, making analysis of water, estimates of cost, with maps, tests and reports on feasibility of each.

The Switzer Canyon impounding reservoir would necessitate a dam 1200 feet long and 25 feet high and would form a lake of 51 acres with an average depth of 7.4 feet when full and a total storage of 165 million gallons. The objectionable features that cause its elimination are necessity of filtration because of organic matter and its low elevation, thus making a pumping plant necessary. The shallow depth, too, is a serious objection.

Fort Valley Reservoir only requires a low dam 18 1/2 feet high and produces a storage of 167 million gallons, but at the shallow average depth of 4 1/2 feet. This surface drainage water with its shallow depth would soon stagnate and would further require filtration, making it expensive to maintain and difficult to overcome objectionable tastes and odors.

Wells at Fort Valley were investigated, records made of the water level in each, depth of water bearing strata and volume of water being secured. The gravel beds were of small thickness and of too limited dimensions for an ample supply. Even if the quantity of the supply was unquestioned, the quality of the water would condemn this as a safe source to adopt. The analysis shows a hardness, thirteen times as high as the present spring supply, and considerable chlorine present.

Crater Lake development has been in progress for years and has frequently been mentioned as a source of water supply. It was up for consideration in 1914 before the present large reservoir and the second pipe line to the springs was constructed. The actual development of the Crater Lake project consists of 2.75 miles of collecting ditches, 1.7 miles of 8-inch slip-joint steel pipe, 465 feet of intake tunnel through the east rim of the lake and 500 feet of outlet tunnel

through the west rim of the lake.

The lake is eleven miles northwest of Flagstaff at an elevation of 8200 feet. At the time of the inspection the lake had an average diameter of 620 feet and a storage of about 20 million gallons.

Last spring water was run into the lake until the depth was 10 1/2 feet greater than at the time of the visit, making an average diameter of 730 feet. A leak then developed and the lake pulled down below the point of leakage. The Crater Lake water is the run-off from a large area some of which is cultivated and much of which is grazed, and consequently carries much silt and organic pollution. After storage in the lake much of this silt settles out, but the water would never be suitable for domestic use without purification. The capacity of Crater Lake is estimated by its owners at 150 million gallons. The depth to get this capacity would have to be about 40 feet. The lake was filled to about 18 feet last spring when the leak developed. The lake is well silted up to the 18-ft. depth, but above that point the lava and ash deposit seems quite porous.

Our knowledge of such reservoirs on this character of soil is that it would not be safe to figure on its use without lining the bottom and side slopes, both to hold the water and prevent leakage, and to preserve the quality. Its use would require a filter plant to make the water suitable for domestic use. Our estimate of the cost of making this supply available would be \$365,000 and then the water would still be of poor quality, compared to the present spring supply. Its hardness being over three times

as high and with chlorine present indicating pollution. As a domestic supply it cannot be recommended and from the financial side it is even less desirable.

The present spring supply as will be seen from details of the report is capable of a much larger development and at a reasonable cost. The visible water not now collected is about equal to the supply being collected. The source is ideal as to avoiding future pollution. The quality of water could not be surpassed anywhere in the country. Its purity and coldness is an asset that Flagstaff citizens should capitalize. Other less fortunate cities would give millions for such water. The collecting lines when enlarged and improved, will bring an abundant supply of water to Flagstaff, meeting for many years the future requirements for both the city and the Santa Fe R. R.

The two small vitrified supply lines from the springs to the reservoir need replacing by installation of a 14 and 13 inch steel line with carrying capacity of 4,800,000 gallons. This capacity is needed to provide an excess storage of 100 million gallons in less than one month's time.

This larger supply line makes it less essential for such a large storage reservoir, and justifies our recommendation for an additional storage of 50 million gallons to tide over dry years and avoid the water shortage that has previously existed.

This, from an engineering standpoint is the proper size, especially when a well-balanced plant is being planned. None of the main features should be disproportionate in capacity, and a 100 million gallon reservoir

would be unbalanced as compared to the consumption and other features of the plant.

The pipe distribution system is lamentably weak in being small lines with consequent inadequate pressure. Not counting the supply lines the distributing system now consists of 2.2 miles of 6-inch, 1.2 miles of 4 inch, 5.0 miles of 3 inch, 3 1/2 miles of 2 inch and 1/2 mile of 1 inch, a total of 12.4 miles, most of it so small that with the reservoir full of water, there is no water for use in all the higher portions of the city. It is proposed to remedy this by laying larger feeder mains, using the 10 and 6 inch now in use from the reservoir to town, which will be replaced by a larger line. About 5-2-3 miles of these larger re-inforced feeder mains should be installed, thereby giving a good uniform pressure over the entire town.

The improvements outlined above are all essential and will give Flagstaff and the Santa Fe an abundant supply of good pure water at proper pressures. The estimates are all based on first-class materials with permanent construction.

The summarized estimates of cost of all the improvements including collecting system, of head work, 14-inch flow line, 50 million gallon reservoir, supply line from reservoir to town, 5-2-3 miles larger feeder lines in distribution system, engineering and incidentals is \$472,398.

At the conclusion of reading of the voluminous report which covered every feature of the proposed improvements to the water system, there was discussion by Engineer Davenport, representing the Santa Fe water department, Division Engineer Roy

Cline of Winslow and others present on costs, methods and means of financing the proposition either in whole or in part and as to what the attitude of the Santa Fe people would be.

There was no division of opinion on the question of improving the water supply at the earliest possible time. However, the meeting was not called with any idea that definite action would be taken, but for a general discussion of the report in order that plans might be worked out with the approval of the Santa Fe people as well as the people of Flagstaff.

CIVIL SERVICE COMMISSION WARNS AGAINST RECENT MISLEADING ADVERTISING

The United States Civil Service commission says that there have been brought to its attention numerous misleading advertising circulars and newspaper advertisements of certain so-called civil service schools.

In these circulars and advertisements, information is given that a railway postal clerk examination is soon to be held. The commission states that no such examination has been announced and that it is not known at this time when it will be necessary to hold an examination of the kind. When one is to be held it will be duly announced.

Many of these so-called civil service schools, said the commission, recruit a considerable part of their clientele among young people of limited education in rural communities, who fall easy victims to alluring statements regarding railway postal clerk and other positions in the government

service and extravagant claims as to the advantages of training with the so-called schools.

The commission points out that definite and authentic information regarding pending examinations may always be obtained from any of its local representatives or by writing direct to the office of the commission at Washington, D. C. The commission has a representative at the postoffice or customhouse in each of approximately 3500 cities throughout the country.

Shakespeare was the first man to use the word "hurry" and he also coined the word "dwindle."

A Valuable Christmas Present

is a scholarship in the Lamson Business College, 28 West Washington Street, Phoenix, Arizona. Every Christmas during the past 33 years some parent has made his son or daughter happy with one of these scholarships. Almost without exception, a few years later these same sons and daughters were holding excellent positions with high salaries, and now many of these same parents are being supported by the sons and daughters to whom they gave the scholarships.

12 weeks \$40.00
20 weeks \$65.00
32 weeks \$90.00
Books and stationery to start, from \$8.00 to \$11.00. For full information write. Mid-winter term of the 34th year opens Tuesday, January 2, 1923.

Value - Variety

Practical Gifts for Men

- Knit Silk Ties, in fancy box, \$1.25.
- Knit and Silk Ties with Silk Handkerchief to match in individual box, set, \$1.50.
- New Grenadine knit or cut Silk Tie with Pongee drawn silk Handkerchiefs to match, in box, set, \$2.50.
- Knit silk Ties with diagonal weave, hand embroidered dots, floral designs and figures, 95c to \$2.50.
- Hand-made narrow and medium width four-in-hand Ties, silk, 75c to \$1.50.
- Grenadine knit Ties, in Christmas boxes, 95c to \$1.25.
- "Eight Wonders of the World," a wonderful new Tie, eight different sets of ties, each displaying a different weave and design. Must be seen to be appreciated, at \$1.50.
- Tie Clasps, many designs and patterns, 75c.
- Handkerchiefs, fancy borders, 35c, 3 for \$1.00; pure Irish Linen, 50c, 75c, \$1.00; pure Irish Linen, initials, 3 in box, \$1.50; Silk Pongee, drawn thread, fancy, \$1.00; white Silk Pongee, very new, \$1.50.
- "Raywell" make dress gloves, cape leather, dark brown, silk lined, \$2.50.
- "Raywell" make, Cordovan color, best grade of leather, and very much the thing for dress wear, \$3.00 and \$3.50.
- "Raywell" make, wool lined dress gloves, for winter wear, warm and dressy, \$2.00 and \$2.50.
- "Raywell" make, fur lined, \$5.00.
- Imported Scotch wool gloves with clasp, \$1.50.
- Armor Plate brand men's Hose, black and brown, very fine silk fibre, 65c.
- Fancy Silk Hose, some with clocks and stripes, different weights, all colors, \$1.15 and \$1.25.
- Wool dress hose, all colors, 85c.
- Pure cassimere sock with silk stripe, \$1.65.
- "Thermo" coat style Sweater, virgin wool, 2 pocket style, several colors, \$6.00.
- "Lamb Knit", 4-pocket style, belted back, all wool, fine selection of colors, \$7.50.
- Heavy knit "rough necks" in pull-over and coat styles, all colors, \$9.85.
- "Travelo" Sweater Vests, pure wool, assorted colors, \$6.00.

- Men's leather house slippers, \$3.50.
- Men's felt house slippers, \$1.95.
- Bath Robes—All patterns and attractive colors, \$5 to \$15. The better grades have girdle or heavy belt, 3 large patch pockets and bound with silk cord.
- Very fine Madras Shirts, silk stripes, Wilson Bros. make, \$3.00.
- Wilson Bros. make, silk and linen in assorted patterns, very well made, \$5.00.
- Pure silk, crepe de chine, broadcloth and jersey, up to the minute, \$6.85.
- Flannel Shirts, gray and heather, \$2.45.
- Aeroplane cloth Shirts, white and tan, with or without collar, \$2.50.
- Madras and percales, all colors, \$1.45 to \$2.50.
- Pongee Silk Shirts, the best to be had, \$6.00.
- Gray flannel Shirts with collar attached, fine grade, \$4.00.
- Leather Traveling Sets, \$5.00 to \$11.00.
- Military Brushes in Leather Cases, \$3.50.
- Artpoint Pencils, nickel plated, \$1.00; silver plated, \$1.50; bronze, \$1.50; green and white gold, \$3.50.
- Men's leather bill fold, \$1.00 to \$4.00.
- Ingersoll Watches in different designs, \$1.50.
- Stick Pins in leatherette boxes, \$2.50.
- Gold Knife, makes a desirable present, \$2.50.
- Cuff Links, in leatherette box, \$1.50 to \$2.50.
- Belt Buckles, sterling silver, 95c to \$2.50.
- Leather Hand Bags, 18 inches long, cloth lined, \$6.95. Other grades in full leather up to \$18.50.
- Suit Cases, 24 in. long; black cow-hide, straps, cloth lined, a big value at \$12.50. Others up to \$18.50.
- Fancy brushed wool Mufflers, assorted colors, \$2.50.
- Dependable Suspenders, in fancy boxes, variety of colors, 75c to \$1.25.
- Army Band and Garter Sets, all colors, per set, 75c.
- Suspender and Garter Sets, in box, \$1.25 and \$2.
- Tie Rings, very nifty looking, \$1.50.

Sid Gassman
MEN'S SHOP

FLAGSTAFF

ARIZONA

MAIL ORDERS PROMPTLY ATTENDED TO.

STOP, LOOK AND WHISTLE

By GOSH

If the sculptors keep on making statues of Abraham Lincoln, soon nobody will know how Lincoln looked.

Home is where the present day daughter has gone down town from.

You see a lot of old familiar faces now, since skirts have been lengthened.

A good deal of this talk about women being possessed of great business acumen has sprung up in various homes after the housewife has presided all day in the apron booth of the charity bazaar and emerged without being more than two dollars short.

How times do change. Most of the shepherd boys of romance and poetry were singing a good share of the time.

The only way I could ever fool my wife was in telling her the plain unvarnished truth. I think it numbed her mental faculties until I could make my getaway.

A really progressive metropolitan newspaper these days is the one which furnishes its readers with a card index to help them keep up with all the murder mysteries appearing in its columns.

Another objection we have to the derby hat is that it is coming back. It always does.

A prominent physician writes that people do not need as much sleep as is commonly supposed. That is fortunate. Most people do not get as much sleep as is commonly supposed.

One of the hardest things in the world to do is to really help anybody. A great many industrious helpers would find the task easier, however, if they wouldn't try to help people who don't want to be helped.

Perhaps you wonder what has become of a lot of folks who used to foot their own horns. Well, they are broadcasting now.

If ice cream made freckles, and hanging on front gates produced rheumatism, as a scientist claims, what a bunch of homely, crippled dandies there would be.

Our idea of a real tightwad is the fellow who, when you return his box of matches, can shake the box and tell by the sound whether you borrowed more than one match.

"I never loved I was any worse than the average gent," disgruntledly said Gap Johnson of Rumpus Ridge, but every time one of the children cuts up wife yells at him, "You're just like yer Paw!" And there's fourteen of the little cusses, each with his special brand of devilment."

Our idea of a wise guy is the fellow who hid his "Sunday suit" and felt hat in the garage the day the committee was out to rustle clothing for a rummage sale.

Being pleased beats looking pleasant.

Many people worry so much about tomorrow that they forget today.

Some people are always surprised that things did not turn out worse.

The bloomin' salesman can demonstrate with it for three months and it's still a new car—but three days after you buy it, it's a "used car."

Home is where you run in for a moment to put on a clean collar.

The burning question with most men at this time of the year is whether they can make their supply of socks last until Christmas when the gift supply comes in.

Our idea of luxury is to have an extra back collar button, after the used one rolls under the dresser.

One of the mysteries of the day is how the two words political and economy ever became hooked together.

Where there's a will there's usually an inheritance tax.

Some people are like cull apples. They have one side that looks pretty good.

Some people are so suspicious that they won't buy a gold fish without worrying for fear it will turn to brass.

We notice that a man doesn't talk about his humble start until he gets to a point where it is no longer necessary to be humble.

A man who doesn't know enough to shut the door in December ought to live in a grape arbor.

The saddest sight in the world is a short man wishing he was taller.

What a lucky thing it is that moths haven't appetites like elephants.

It is much better to do your duty than explain why you didn't.

One who evidently knows says that hornets hold the record for supplying the most experience in the least time.

A scientist has discovered a way of showing the movies in the light. Now we will know who eats the peanuts.

The place most useful for a permanent wave is in a flag.

Even most of the calendar leaves have fallen.